

CLAIMS

1. A receiver comprising a plurality of antennas for receiving signals originally transmitted as a plurality of different signals, coding means for
5 applying a respective unique code to the signal received by each antenna, summing means for combining the plurality of coded signals into a single signal, frequency translation means for translating the frequency of the single signal to a lower frequency and extraction means for extracting a plurality of
10 codes employed by the coding means.

2. A receiver as claimed in claim 1, characterised in that the respective unique codes are orthogonal codes.

15 3. A receiver as claimed in claim 2, characterised in that the respective unique codes are Walsh codes.

4. A receiver as claimed in claim 2 or 3, characterised in that the rate of the unique code is at least N times the symbol rate of the received
20 signals, where N is equal to the number of antennas.

5. A receiver as claimed in claim 3, characterised in that the first Walsh code, $wal(0, \theta)$, is not used.

25 6. A receiver as claimed in any one of claims 1 to 5, characterised in the extraction means comprise correlators.

7. A method of operating a receiver comprising a plurality of antennas for receiving signals originally transmitted as a plurality of different
30 signals, the method comprising applying a respective unique code to the signal received by each antenna, combining the plurality of coded signals into a single signal, translating the frequency of the single signal to a lower frequency

and extracting a plurality of signals from the frequency-translated single signal by reference to the unique codes used to generate the coded signals.

8. A method as claimed in claim 7, characterised in that the
5 respective unique codes are orthogonal codes.

9. A method as claimed in claim 8, characterised in that the
respective unique codes are Walsh codes.

10. A method as claimed in claim 8 or 9, characterised in that the
10 rate of the unique code is at least N times the symbol rate of the received signals, where N is equal to the number of antennas.

11. A method as claimed in any one of claims 7 to 10, characterised
15 in that the extraction of the plurality of signals is performed using correlators.